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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,457	04/20/2001	Paul F. Struhsaker	WEST14-00022	4833

7590 02/09/2005  
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EXAMINER
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GEORGE, KEITH M

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/839,457

Applicant(s)

STRUHSAKER ET AL.

Examiner

Keith M. George

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 11-14 is/are rejected.
- 7) ☒ Claim(s) 5-10 and 15-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)     | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4 and 11-14 rejected under 35 U.S.C. 102(e) as being anticipated by Gilbert et al., U.S. Patent 6,016,311, hereinafter Gilbert.
3. Referring to claims 1 and 11, Gilbert teaches an adaptive time division duplexing method and apparatus for dynamic bandwidth allocation within a wireless communication system including, as shown in figure 9, a cluster controller (frame allocation controller). The base stations (figure 4, 106), monitor the bandwidth requirements of their respective cells and report results back to the cluster controller (receiving from a modem shelf associated with a base station access requests generated by a group of wireless access devices) and accept updates and commands from the cluster controller thereby changing the uplink/downlink time slot allocations based upon the bandwidth requirements (determining from traffic requirements associated with the access requests a time duration of a longest downlink portion of TDD frames and determines a frame allocation of the downlink portion and the uplink portion of TDD frames used to communicate with the wireless access devices based upon the longest downlink portion time duration) (column 14, lines 1-6).

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4. Referring to claims 2 and 12, Gilbert teaches the cluster controller described in reference to claims 1 and 11 above and also teaches the Cluster Controller Analysis (column 16, line 46 - column 17, line 67) that provides greater detail of the calculations performed by the cluster controller. The cluster controller calculates the uplink and downlink requirements from the associated base stations and calculates a bandwidth allocation scheme. It is clear that the bandwidth allocations scheme prevents interference between base stations by allocating time slots based on the bandwidth needs of the channel (column 18, lines 23-28).

5. Referring to claims 3 and 13, Gilbert teaches the cluster controller described in reference to claims 2 and 12 above and also teaches that the cluster controller is responsible for the synchronization, control and management of the base stations (column 13, lines 51-52).

6. Referring to claims 4 and 14, Gilbert teaches the cluster controller described in reference to claims 3 and 13 above and also teaches that in the Cluster Controller Analysis, the cluster controller sums all of the downlink requirements from all associated base stations and then calculates an estimated bandwidth allocation scheme (column 17, lines 5-18).

***Allowable Subject Matter***

7. Claims 5-10 and 15-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

8. Applicant's arguments filed 10 January 2005 have been fully considered but they are not persuasive.

9. Referring to claims 1 and 11, applicant has maintained an argument similar to previously presented arguments focusing on the claim limitation of a longest downlink portion time duration. Applicant argues that Gilbert does not teach or suggest determining a longest time duration for downlink traffic requested from a base station by respective cells within a cluster. In response, the Examiner maintains that this limitation is inherent to the steps clearly described by Gilbert. The passage cited by applicant remains the primary evidence for this teaching. Gilbert clearly states that the base stations monitor the bandwidth requirements of their respective cells and report the results back to the cluster controller and then accept updates and command from the cluster controller thereby changing the uplink and downlink time slot allocations based upon the bandwidth requirements. The claim limitation states to determine from traffic requirements, the time duration of a longest downlink portion, and then to allocate the downlink and uplink portion based upon the longest downlink portion time duration. Gilbert clearly performs this step. Gilbert not only finds the longest downlink portion time duration, but the downlink and uplink portion time duration for every cell. This information is used directly by the cluster controller to determine the time slot allocation. The claims, as recited, are clearly taught by the cited prior art.

10. Applicant provides an additional argument that states that nothing in Gilbert has been identified that suggests the cluster controller compares time slots allocations and/or bandwidth requirements for different devices and claims this is a necessary step in determining the longest

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time duration requirement for a downlink portion as recited in the claims. The Examiner respectfully disagrees with this statement. The step of determining does not inherently contain a step of comparing and a step of comparing does not appear in the claims. Applicant is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

11. No further arguments have been provided in response to the rejections of claims 2-4 and 12-14, therefore these rejections are maintained.

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***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith M. George whose telephone number is 571-272-3099. The examiner can normally be reached on M-Th 7:00-4:30, alternate F 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Keith M. George  
7 February 2005



CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600 2/7/05